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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT A. KEENE[1]

Appeal 2016-007045
Application 13/912,427
Technology Center 3600

Before JAMES R. HUGHES, JOHNNY A. KUMAR, and JOHN P. PINKERTON, *Administrative Patent Judges*.

PINKERTON, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–5, 7–11, and 13–18, which constitute all of the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellant identifies International Business Machines Corporation as the real party in interest. App. Br. 1.

STATEMENT OF THE CASE

Introduction

Appellant describes the disclosed and claimed invention as follows:

> The present invention generally relates to a method, system, and program product for generating a demanufacturing price quote. Specifically, the present invention allows price quotes to be generated for the processing of end-of-life electronic equipment that is to be dismantled, recycled or otherwise disposed of in an environmentally safe manner.

Spec. 1.[2]

Claims 1 and 7 are representative and reproduced below:

> 1. A recordable medium comprising processor readable program code stored therein, said medium not being a transitory propagating signal, said program code upon being executed by a demanufacturing price quote processor implements a method for generating a price quote for demanufacturing and disposing of a given lot of end-of-life electronic equipment in an environmentally safe manner, said method comprising:
>
> receiving, by the demanufacturing price quote processor, one or more default data values, said one or more default data values comprising at least one default data value having a monetary value;
>
> storing, by the demanufacturing price quote processor, the one or more default data values in each representative equipment group of a plurality of representative equipment groups of electronic equipment;

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[2] Our Decision refers to the Final Office Action mailed May 20, 2015 ("Final Act."); Appellant's Appeal Brief filed Oct. 20, 2015 ("App. Br."); the Examiner's Answer mailed May 6, 2016 ("Ans."); Appellant's Reply Brief filed July 6, 2016 ("Reply Br."); and the original Specification filed June 7, 2013 ("Spec.").

computing, by the demanufacturing price quote processor, a respective group quantity of electronic equipment in each representative equipment group;

computing, by the demanufacturing price quote processor, at least one product by multiplying each default data value of the at least one default data value by the respective group quantity;

calculating, by the demanufacturing price quote processor, a profit or loss for each representative equipment group in dependence on the computed at least one product;

calculating, by the demanufacturing price quote processor, a net profit or loss by adding together the calculated profit or loss of the representative equipment groups of the plurality of representative equipment groups;

ascertaining, by the demanufacturing price quote processor, that the calculated net profit or loss is a net loss;

adjusting, by the demanufacturing price quote processor, the net profit or loss by increasing the net loss by a specified pricing contingency factor; and

determining, by the demanufacturing price quote processor, the price quote using the adjusted net profit or loss,

wherein the demanufacturing price quote processor is special purpose hardware.

7. A system comprising:

a shredder; and

a demanufacturing price quote processor and a recordable medium having processor readable program code stored therein, said processor being hardware, said medium not being a transitory propagating signal, said program code upon being executed by the processor implements a method for generating a price quote for demanufacturing and disposing of a given lot of

end-of-life electronic equipment in an environmentally safe manner, wherein the price quote for the demanufacturing and the disposing includes a price for shredding the electronic equipment, said shredder and said processor configured to collectively perform a process pertaining to the demanufacturing and disposing of the electronic equipment, said process comprising the method, said process comprising:

receiving, by the demanufacturing price quote processor, one or more default data values, said one or more default data values comprising at least one default data value having a monetary value;

storing, by the demanufacturing price quote processor, the one or more default data values in each representative equipment group of a plurality of representative equipment groups of electronic equipment;

computing, by the demanufacturing price quote processor, a respective group quantity of electronic equipment in each representative equipment group;

computing, by the demanufacturing price quote processor, at least one product by multiplying each default data value of the at least one default data value by the respective group quantity;

calculating, by the demanufacturing price quote processor, a profit or loss for each representative equipment group in dependence on the computed at least one product;

calculating, by the demanufacturing price quote processor, a net profit or loss by adding together the calculated profit or loss of the representative equipment groups of the plurality of representative equipment groups;

ascertaining, by the demanufacturing price quote processor, that the calculated net profit or loss is a net loss;

> adjusting, by the demanufacturing price quote processor, the net profit or loss by increasing the net loss by a specified pricing contingency factor;
>
> determining, by the demanufacturing price quote processor, the price quote using the adjusted net profit or loss; and
>
> shredding, by the shredder, the electronic equipment in accordance with the price for shredding the electronic equipment included in the price quote.

App. Br. 26–30 (Claims App.).

Rejection on Appeal[3]

Claims 1–5, 7–11, and 13–18 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellant's arguments in the Briefs. For the reasons discussed *infra*, we are not persuaded by Appellant's arguments that the Examiner erred in rejecting claims 1–5, 7–11, and 13–18 under 35 U.S.C. § 101.

Applicable Law

In *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014), the Supreme Court set forth an analytical "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S. Ct. at 2355 (citing *Mayo Collaborative Svcs. v. Prometheus Labs., Inc.*, 566 U.S.

[3] The Examiner's rejection of claims 7–11 under 35 U.S.C. § 112, first paragraph, was withdrawn. Ans. 2.

66, 75–77 (2012)). The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. If, at the first stage of the *Alice* analysis, we conclude that the claim is not directed to a patent-ineligible concept, it is considered patent eligible under § 101 and the inquiry ends. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016).

If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims "individually and 'as an ordered combination'" to determine whether there are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). In other words, the second step is to "search for an 'inventive concept'—*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Id.* (brackets in original) (quoting *Mayo*, 566 U.S. at 72–73). The prohibition against patenting an abstract idea "'cannot be circumvented by attempting to limit the use of the formula to a particular technological environment' or adding 'insignificant postsolution activity.'" *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (internal citation omitted).

In determining whether a process claim recites an abstract idea, we must examine the claim as a whole, keeping in mind that an invention is not ineligible just because it relies upon a law of nature or mathematical algorithm. *Digitech Image Tech. LLC v. Electronics for Imaging Inc.*, 758 F. 3d 1344, 1350 (Fed. Cir. 2014). As noted by the Supreme Court, "an

application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." *Diamond v. Diehr*, 450 U.S. 175, 187 (1981). The "directed to" inquiry asks not whether "the claims *involve* a patent-ineligible concept," but instead whether, "considered in light of the specification, . . . 'their character as a whole is directed to excluded subject matter.'" *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (internal citations omitted). In that regard, we determine whether the claims "focus on a specific means or method that improves the relevant technology" or are "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016).

Claims 1–5 and 13–18[4]

Regarding step one of *Alice*, Appellant acknowledges that claim 1 is "directed to the abstract idea of determining a price demanufacturing quote based on mathematical relationships or formulas." App. Br. 22. Regarding step two of *Alice*, Appellant argues the claim recites "significantly more" than the abstract idea because the claim recites "wherein the demanufacturing price quote processor is *special purpose hardware*." *Id.* at 22–23 (emphasis added). According to Appellant, page 16, lines 15–21 of the Specification makes it clear that "the embodiment of the demanufacturing price quote processor . . . in special purpose hardware is distinguished from a generic computer . . . and is thus significantly more

[4] Appellant argues these claims as a group. *See* App. Br. 21–24; Reply Br. 7–9. We select claim 1 as the representative claim for this group, and the remaining claims 2–5 and 14–18 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

than an abstract idea." Reply Br. 8 (emphasis omitted). Appellant also argues the details of the special purpose hardware are not necessary for it to be significantly more than the abstract idea. *Id.* at 9.

We are not persuaded by Appellant's arguments that the Examiner erred. Instead, we agree with the Examiner that the recitation of "special purpose hardware," without more, is insufficient to ensure the claim describes a process or product that applies the exception in a meaningful way. Ans. 9–10. First, Appellant's argument that the Specification distinguishes "special purpose hardware" from a generic computer is not persuasive because the Specification states that "[a]ny kind of computer/server system(s), or other apparatus, such as special purpose hardware or a circuit module, adapted for carrying out the methods described herein, is suited." Spec. 16:19–21. In other words, a generic computer and special purpose hardware are functionally equivalent and suitable, as long as they are "adapted for carrying out" the method for generating a price quote. The claimed "special purpose computer" is not distinguished based on any technological difference. Appellant's alleged distinction is, therefore, a distinction without a difference. Second, without specifying any details of the claimed "special purpose hardware," claim 1 does not "focus on a specific means or method that improves the relevant technology," but is "directed to a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery." *McRO*, 837 F.3d at 1314; *Enfish*, 822 F.3d at 1336. Thus, we conclude claim 1 does not recite "significantly more" than the abstract idea of generating a price quote for demanufacturing. Accordingly, we affirm the Examiner's rejection of claim 1 under § 101 as being directed to non-statutory subject matter.

Claims 7–11

Regarding step one of *Alice*, Appellant argues claim 7 is not directed to an algorithm for calculating a manufacturing price quote as the Examiner finds (*see* Final Act. 9), but "is directed to a system having a shredder and a processor collectively performing a process pertaining to the demanufacturing and disposing of the electronic equipment." App. Br. 11. Appellant argues that the price quote serves as input to, and "is subsidiary to," the shredding step, which recites "shredding, by the shredder, the electronic equipment in accordance with the price for shredding the electronic equipment included in the price quote." *Id.* at 11–12. Citing *Enfish*, Appellant argues "the fact that claim 7 involves a mathematical relationship or formula does not imply that claim 7 is directed to an abstract idea," and the claim as a whole "is directed to the demanufacture and disposal of electronic equipment, which is not an abstract idea." Reply Br. 4–5.

We are not persuaded by Appellant's arguments. Appellant's Specification is almost entirely directed to demanufacturing price quote generation. This is not only the object of the invention, but each described embodiment is directed to generating a demanufacturing price quote. *See* Spec. 3–6. The word "shredded" and the word "shred" each appear once in the Specification. Spec. 11. Consistent with the Specification, system claim 7 recites a process in which a demanufacturing price quote processor generates a price quote for demanufacturing and disposing of a given lot of electronic equipment. As set forth in claim 7, after receiving and storing data values, the processor performs the steps of: "computing . . . a respective group quantity;" "computing . . . at least one product by multiplying . . .; "calculating . . . a profit or loss for each . . . group in

dependence on the computed . . . product;" "calculating . . . a net profit or loss;" "ascertaining . . . that the net profit or loss is a net loss;" "adjusting . . . the net profit and loss," and "determining . . . the price quote using the adjusted net profit or loss." These portions of claim 7 recite mathematical computations and a mathematical formula directed to the abstract idea of calculating a demanufacturing price quote. It is well established that data analysis and algorithms are abstract ideas. *See, e.g., Alice*, 134 S. Ct. at 2355; *Parker v. Flook*, 437 U.S. 584, 589, 594–95 (1978) ("Reasoning that an algorithm, or mathematical formula, is like a law of nature, *Benson* applied the established rule that a law of nature cannot be the subject of a patent"); *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972).

System claim 7 also recites "a shredder" and the step of "shredding, by the shredder, the electronic equipment in accordance with the price for shredding the electronic equipment included in the price quote." The recited "shredder" is nothing more than a generic shredder, and the shredding step merely performs the basic function of shredding based on the price quote. Thus, considering clam 7 as a whole, it is directed to the abstract idea of shredding electronic equipment based on a mathematically calculated price quote. In other words, claim 7 is not directed to improving shredding technology, but is directed to any shredding of electronic equipment based on a calculated price quote. Claim 7 presents the classic situation in which the claim is not directed to a specific invention, but instead attempts to monopolize "the basic tools of scientific and technological work." *Alice*, 134 S. Ct. at 2354 (internal quotation marks and citation omitted). "A patent may issue 'for the means or method of producing a certain result, or effect, and not for the result or effect produced.'" *McRO*, 837 F.3d at 1314 (internal citation omitted). Here, claim 7 does not focus on a specific means

or method to improve shredding, but is instead directed to the result or effect itself—the abstract idea of shredding electronic equipment based on a generated price quote—using only generic processes and apparatus. *Id.*

Regarding step two of *Alice*, Appellant argues that "the shredder and the shredding are significantly more than an abstract idea to which claim 7 is allegedly directed, at least because the shredder and the shredding are non-abstract physical elements that are essential for implementing the demanufacturing and disposing of electronic equipment." App. Br. 14–16; Reply Br. 5–7. We are not persuaded by Appellant's argument, but instead agree with the Examiner's finding that the "shredder . . . does not render patent-eligibility on account of representing well-understood, routine, and conventional activities previously known to the industry." Final Act. 10. Appellant's claimed generic shredder and well known shredding step are not the type of additional features *Alice* envisioned as imparting patent eligibility. *See Alice*, 134 S. Ct. at 2358 ("[T]he mere recitation of a generic computer cannot transform a patent in-eligible abstract idea into a patent-eligible invention. Stating an abstract idea while adding the words 'apply it' is not enough for patent eligibility") (quoting *Mayo*, 566 U.S. at 72 (internal quotation marks omitted)). Further, shredding by the shredder amounts, at most, to mere insignificant post-solution activity and attempts to limit the use of the abstract concept of generating and utilizing a demanufacturing price quote to a particular technological environment. *See Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315, 1328–29 (Fed. Cir. 2017) (citing *Bilski v. Kappos*, 561 U.S. at 612). Thus, considering the features of claim 7 individually and as an ordered combination, we find there are no additional elements that transform the nature of the claim into a patent-eligible application. *Alice*, 134 S. Ct. at 2355.

Accordingly, we sustain the Examiner's rejection of claim 7 under § 101, as well as dependent claims 8–11, which are not separately argued.

DECISION

We affirm the Examiner's decision rejecting claims 1–5, 7–11, and 13–18 under 35 U.S.C. § 101.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED